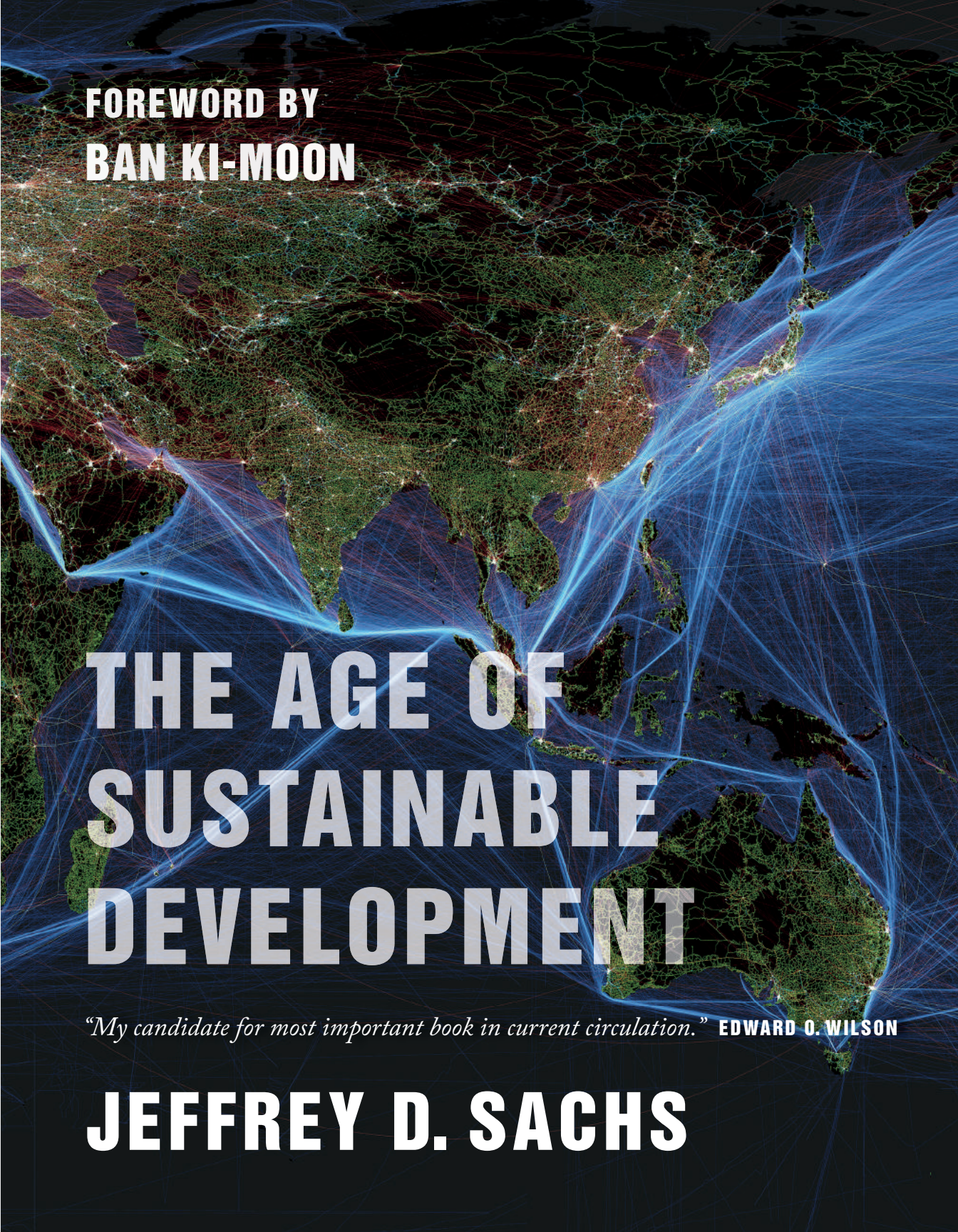




**FOREWORD BY
BAN KI-MOON**

THE AGE OF SUSTAINABLE DEVELOPMENT

"My candidate for most important book in current circulation." **EDWARD O. WILSON**

JEFFREY D. SACHS

2

AN UNEQUAL WORLD

I. Incomes Around the World

Sustainable development has three major aspects: economic development, broad-based social inclusion, and environmental sustainability; all supported by good governance. But what do we mean by economic development? How do we measure it, and what is the state of play in today's very complicated and diverse world?

There are many different dimensions of economic development, and therefore many measurements are needed to assess a country's development process. Nonetheless, we tend to rely heavily on a single measurement called the gross domestic product (GDP) of a country. The GDP means the total production occurring within the geographic boundaries of a country, typically expressed for a one-year period. *Gross* in the GDP means measuring every market transaction within the country. *Domestic* signifies that the measurement is of economic activity within specific geographic boundaries; usually a country, but sometimes a city, region, or even the world. *Production* signifies that what we're measuring is not the trade in preexisting capital (such as the resale of a house) but the flow of new output in a given time period.

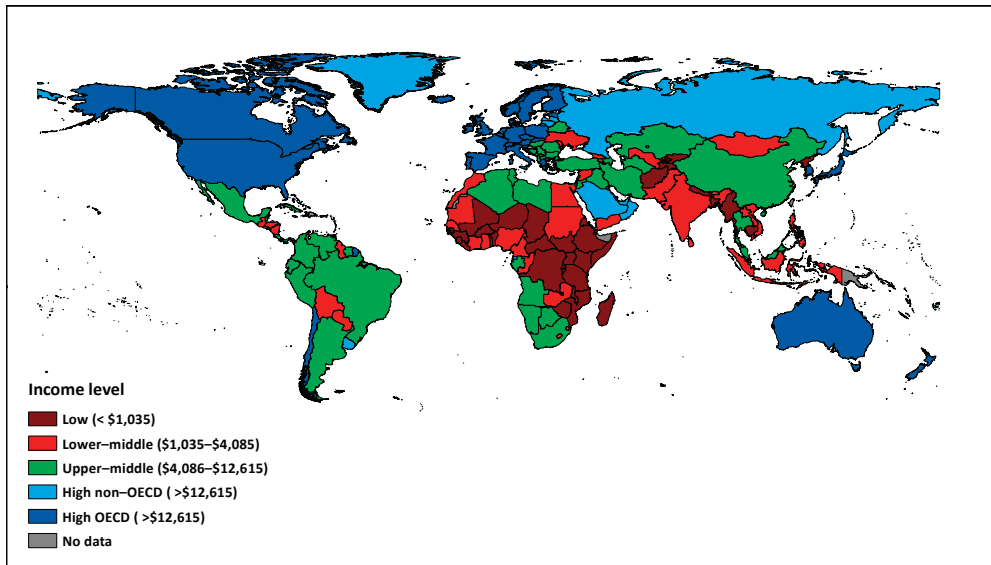
There is one more critical point about measuring GDP. In general we are interested in getting a sense of a country's standard of living. To do that, we

take the total production in the country over a given time period and divide it by the population to derive the GDP per person, or GDP *per capita*. Larger countries have more people and more workers and therefore produce more. If we simply compared countries in terms of the total production, we would find that highly populated countries have higher production, but we would not know whether the living standards of the larger countries are really higher than those of the smaller countries that produce less in total but more per person.

GDP per person is really not a comprehensive measure of economic development, because there are many other important indicators of wellbeing that it does not precisely capture, including the health and education of the population. Still, as a shorthand, GDP per person is a reasonable first indicator of where things stand on many dimensions, all of which tend to be related to output per capita, even if they are not precisely measured by it. Indeed, GDP per capita is what the World Bank and other international organizations use to summarize a country's current level of development. The United Nations and the World Bank keep systematic tabulations on GDP per person and classify countries on this basis.

The World Bank places countries into three main categories: high-income, middle-income, and low-income. The classification is based on the country's GDP per capita. On the current criteria, a country is low-income if its GDP per capita is below \$1,035 per person per year, or about \$3 per day. A middle-income country is in a band between \$1,035 and \$12,615 per person per year. The high-income countries are above the \$12,616 per person threshold. There are then refinements. The middle-income group, which is quite big, is split between the upper-middle-income and the lower-middle-income, with the dividing line at \$4,085 per person per year. Note that the precise boundaries are readjusted periodically with changes in global market conditions.

Figure 2.1 shows the high-income countries, shaded blue: the United States, Canada, western Europe, Japan, South Korea, Australia, New Zealand, and a few other parts of the world. This is about 1 billion of the roughly 7 billion people on the planet, around 15 percent of the world's population. The large middle group of green colors covers quite a wide expanse of the world. Indeed, five out of seven in the world's population are in the middle-income category, with approximately 2.5 billion people in both the upper-middle-income and the lower-middle-income



2.1 Country income groups (World Bank classifications)

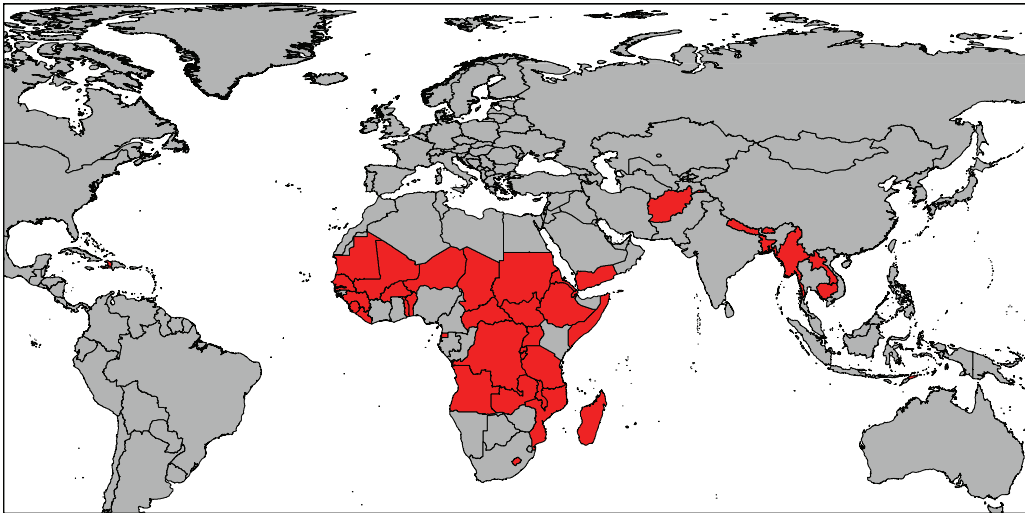
Source: World DataBank.

categories. The countries shaded red are the low-income countries, with approximately 1 billion people. There is a strong geographical pattern in these classifications. The low-income countries are heavily concentrated in two regions: tropical Africa and South Asia, with a few other low-income countries scattered in other parts of the world. (Note that tropical Africa signifies the part of Africa between the Tropic of Cancer at 23.45 degrees north latitude and the Tropic of Capricorn at 23.45 degrees south latitude. It excludes the countries of North Africa and those of southern Africa.)

There is one more very important UN category. There is a subgroup within the low-income countries that is in rather desperate shape. Not only are they poor; in most cases the levels of disease, education, and social instability are also unusually bad. Many are relatively isolated, poor island economies. Moreover, many of the countries in this group are very vulnerable to droughts, floods, conflict, and violence. The United Nations has classified this group as the *least-developed countries* (LDCs). Figure 2.2 shows the fifty countries currently on the list. Among the

LDCs, the poorest of those are again heavily concentrated in tropical Africa and Asia (in this case spanning central, South, and Southeast Asia).

The map also suggests something very interesting and telling. Asia, Afghanistan, Nepal, Bhutan, and Laos are all landlocked countries. In Africa, the LDCs include several more landlocked countries: Burkina Faso, Mali, Niger, Chad, the Central African Republic, Uganda, Rwanda, Burundi, and Malawi. This very high presence of landlocked countries on the LDCs list is not a coincidence. Economic development depends heavily on international trade, which is significantly more difficult for landlocked countries. Being landlocked does not sentence a country to extreme poverty (just think of Switzerland and Austria!), yet it is an added hurdle to development, especially when the landlocked country is surrounded by poor coastal economies. Note that the LDCs also include a number of small island economies, which can be quite vulnerable. They are subject to extreme climate catastrophes (such as tropical cyclones, storm surges, and droughts) and are often relatively isolated with small populations and high shipping costs to major ports.



2.2 The least-developed countries (LDCs)

Source: World DataBank.

There are two more important details in terms of GDP measurement. Since countries typically have their own national currencies (or are part of a regional currency such as the euro), each nation's transactions are measured in its own currency. To make a common standard, the national currencies must be converted to a common currency using an exchange rate. Almost always, the common standard is the U.S. dollar, with each country's exchange rate to the dollar used to convert the GDP to a common U.S. dollar base. Mexico's 2012 GDP per capita, for example, is 135,000 Mexican pesos per dollar. The peso-dollar exchange rate in 2012 was 13.2 pesos per dollar. Therefore, the Mexican GDP equaled \$10,200 per person in U.S. dollars.

There is one more translation that can also be enormously useful to make one more adjustment for the difference of costs or prices in different countries. If one buys an automobile or a television set almost anywhere in the world, the price will be fairly similar, because these are goods that are traded internationally and therefore have a similar price. Yet for many other goods and services, such as apartment rents, foods that are produced and consumed locally, or personal services (such as haircuts or movie tickets), prices can vary enormously across countries even when converted to dollars by the market exchange rate. The price of a haircut in Mogadishu might be one hundredth of what one would pay in a salon in Paris. We must take such price differences into account in order to compare living standards across countries.

Suppose that in one country the GDP per capita (converted to U.S. dollars at the market exchange rate) is \$6,000 per person, while in a second country the GDP per capita is \$3,000 per person. It might appear that the first country is twice as rich as the second. Yet if the average price level in the second country is also half of that in the first, that is, if the goods and services on average cost only half as much, the actual living standards of the two countries would be comparable.

To take price-level differences into account, the GDP per capita is sometimes measured using a common standard of international prices, such as prices for food-stuffs, rent, haircuts, movie tickets, legal fees, and the rest. This unit of account is called GDP per capita at international prices (expressed in dollars), or GDP per capita at purchasing power parity. Purchasing power parity is sometimes abbreviated as PPP, so one will often see this measurement called GDP per capita (PPP).

Consider once again the Mexican example. In 2012, the Mexican GDP per capita was around \$10,200, while the U.S. GDP per capita was around \$51,000.

It would seem that average living standards (based on GDP per capita) were roughly five times higher in the United States. Yet Mexico's price level was lower than in the United States, so Mexico's living standards did not really lag behind those of the United States by a factor of five. On one set of measurements, used by the International Monetary Fund (IMF), Mexico's overall price level was roughly two-thirds of the U.S. price level (taking an average over a large number of goods and services). Thus, while the GDP per capita was \$10,200, Mexico's GDP per capita at PPP was roughly \$15,400. Thus, the United States exceeded Mexico's average GDP per person not by a factor of five, but by a factor of 3.3, not quite so large.

The PPP adjustment is largest for the poorest countries (since the price level of goods and services in the poorest countries tends to be lowest—think haircuts!). In a typical poor African country, for example, the GDP per capita in PPP units tends to be three to four times larger than the GDP expressed at market prices. Consider poor, landlocked Malawi, for example. For 2012, the IMF records its GDP per capita at market prices at \$250, less than \$1 per day. Adjusting for differences in price level, Malawi's GDP per capita (PPP) was \$848, still a very low living standard but not quite as low as suggested by the GDP at market prices.

The big picture is that we classify economic development in shorthand by the GDP per person, adjusting for population, currency, and price level. We can then study key questions. Why are countries at different levels of economic development? How do these levels of development relate to things like health, wellbeing, and happiness, concepts not directly measured by GDP per capita? What can the low-income countries do to raise living standards and achieve economic growth fast enough to narrow the gap significantly with the wealthier countries? This final question, of course, is one of the key policy challenges of sustainable development.

II. Urban-Rural Inequality

We have looked at GDP per person as a summary measure of how to classify countries in their respective levels of economic development, but we should note that countries have great variations of living standards within them as well as between

them. It is very important, especially in view of sustainable development's commitment to social inclusion and broad-based prosperity, to understand the variations and inequalities of living standards within countries. Perhaps the starkest kind of variation within countries is the difference between rural and urban life.

Before the Industrial Revolution, virtually the entire world population, roughly 90 percent, were living in rural areas, eking out an existence as smallholder farmers trying to grow enough food for their families and perhaps a little for the marketplace, at least in good years. When we think about the preindustrial era, we might think about bucolic England, with shepherds guiding their flocks on the hillsides while farmers toil in the fields below. That kind of rural scene is still very familiar in many parts of the world, especially in Africa and Asia. However, the world is very quickly becoming more urbanized. The process of urbanization is changing lives in fundamental ways and leading to vast differences within countries as well.

In almost every country in the world there are both rural and urban populations, often with very different qualities and types of lives. (The key exceptions are a number of small city-states, such as Hong Kong and Singapore, where there is no rural life.) Since many countries are in a transition from predominantly rural to predominantly urban life, it is quite important to understand the differences between rural and urban living and what these differences mean in terms of wellbeing, income levels, and kinds of economic activities.

It is important to start by clarifying the definition of "urban." Interestingly, there is no official international definition of what it means to be an urban area. The United Nations relies on national definitions, which differ across countries. Generally speaking, an urban area is a place where at least several thousand people live in a relative densely settled area. Of course there can be millions of people living in a single densely settled area (called an *urban agglomeration*), but it is the minimum threshold that defines an urban area versus a rural village, and that threshold varies by country. Some countries use a threshold of at least 2,000 people living in a dense settlement as the dividing line between a rural village and a small urban area. Other countries use 5,000 as the threshold.

Either way, the difference between rural and urban has some pretty basic characteristics that are very important to the process of economic development and

to the nature of inequality within countries. The first consequential difference is what people do to earn a living. Agriculture is the mainstay of rural areas, whereas industry and services are the mainstays of urban areas. As countries experience rising proportions of their populations in urban areas, this also signifies a rising proportion of the labor force in jobs in industry and services and a declining share in agriculture. This is a nearly universal trend as part of the process of GDP per capita rising.

Generally speaking, income per person tends to be higher in urban areas than in rural areas, which encourages the flow of the rural population to the urban areas. (Such a pattern is common but not universal.) The locations of rural villages and urban areas generally also differ. Rural populations are settled in good food-growing areas. Urban areas tend to be located at coasts or along rivers, where it is easier to engage in sea-based trade. The balance of rural and urban is thus also typically a balance of interior and coastal orientation of the country. As countries urbanize, they tend also to become more coastal in orientation, that is, with a higher proportion of the population living near the sea.

Population densities—the numbers of people residing per square mile or square kilometer—also tend to be very different in rural and urban areas. Population densities are generally low in rural areas, since each farm family needs a high ratio of land to people. The population density is typically below 100 people living within a square kilometer (km^2), although higher ratios are recorded in crowded rural Asia. By contrast, urban areas are often packed with thousands of people per square kilometer.

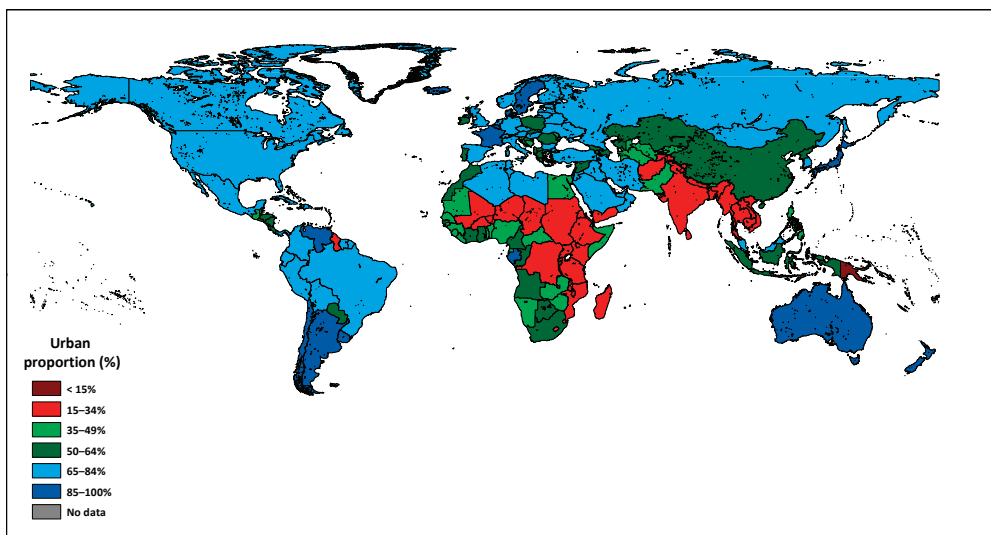
As a result, the quality of public services also tends to differ. It is much harder to provide electricity, piped water, and sewerage systems in rural areas where populations are quite dispersed, relative to urban areas where populations are tightly settled. This is one of the reasons why income levels, health standards, and overall living standards tend to be higher in urban areas.

One other quite notable difference between rural and urban areas is that fertility rates (the average number of children per woman) tend to be higher in rural areas, or to put it differently, rural families tend to be larger. There are many reasons for this difference, but one key reason is that young children are often seen as productive farm workers, whereas children in urban areas are often seen as

“expensive,” because they go to school rather than do chores on the farm. The result is that when households move from rural to urban areas they also often choose to have fewer children. Other causes include: the higher income levels of urban households; the higher level of mothers’ education in urban areas; the greater access of urban mothers to family planning and modern contraceptives; and the higher child survival in urban areas, so urban families have less fear about the survival of their young children. All of these factors contribute to the lower fertility rates in urban areas.

Global Trends in Urbanization

Figure 2.3, which shows the proportion of each country’s population in urban areas, looks a bit like the map of income per person. The richer parts of the world tend to be more urban; the poorer parts of the world tend to be more rural. The Americas are very highly urbanized societies, with generally 80 percent or more



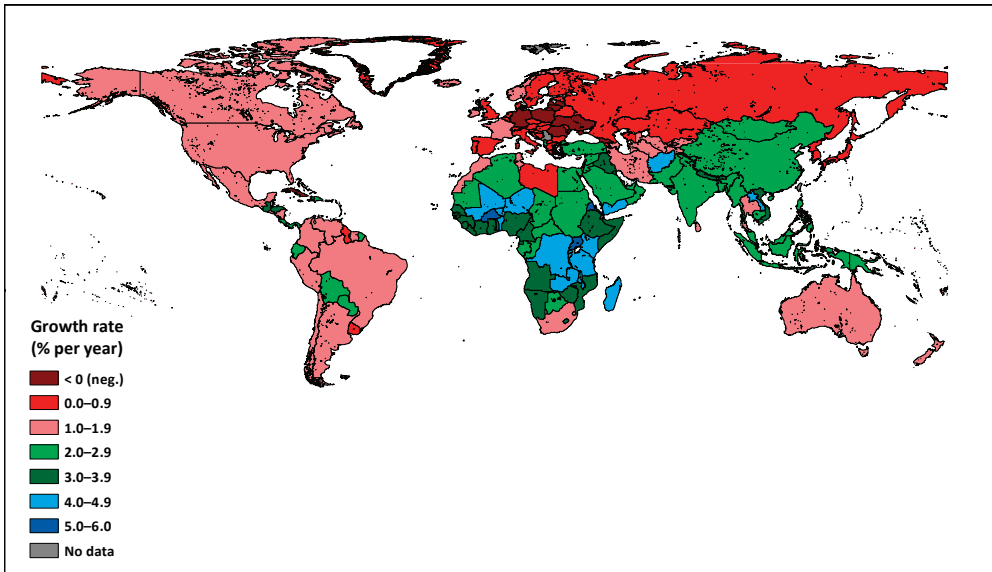
2.3 Proportion of the population in urban areas

Source: United Nations Department of Economic and Social Affairs Population Division (DESA Population Division). 2012. “World Urbanization Prospects: The 2011 Revision.”

of the population living in urban areas. Meanwhile, tropical Africa is still quite rural, with around 25–35 percent of the population living in urban areas. One sure fact, however, is that almost everywhere in the world, urbanization is proceeding rapidly and is a critical part of the economic development process.

Figure 2.4 shows the growth rates of the urban areas, demonstrating the annual proportionate increase of populations living in urban areas. It is actually in Africa, today's most rural region, where urbanization rates are extraordinarily high. Africa is catching up in urbanization. Africa's urban areas are often growing at around 5 percent per year, in which case it takes around 14 years for the urban areas to double in size (using the rule of 70, we find that $14 \text{ years} = 70/5$). In that case, a large urban agglomeration of 5 million today would become a mega-city of 10 million in just 14 years.

The worldwide trend is toward urbanization. We expect the world's population to reach 8 billion by 2025 and 9 billion by 2040. All of that increased population



2.4 Urban growth rates

Source: United Nations Department of Economic and Social Affairs Population Division (DESA Population Division). 2012. "World Urbanization Prospects: The 2011 Revision."

is expected to live in urban areas, since the total rural population is expected to remain roughly constant at around 3.3 billion by 2035 and then to decline slightly to 3.2 billion by 2050. This means that all future population growth on the planet is urban population growth. The proportion of the world living in urban areas is going to rise from around 53 percent in 2013 to around 60 percent by 2030 and 67 percent by 2050. Prosperous, healthy, and resilient cities are going to be a core challenge of sustainable development.

As the process of urbanization takes place, the countryside is also transformed. For example, in the United States the farm population is now under 1 percent of the entire labor force and the rural population is only 19 percent, even though 95 percent of U.S. land is classified as rural. Farms in the United States are very large and efficient, whereas in today's poorer rural countries there are still many smallholder farmers working very small plots. As the population moves to urban areas, a number of those farms will eventually consolidate and become larger per farm household.

In sum, in the process of economic development the arrow is pretty strong from rural to urban. Urbanization is associated with higher incomes, better public services, better education, and declining fertility rates. We see that in many parts of the low- and middle-income regions of the world. Along the way, societies and cultures are deeply divided between rural and urban interests, politics, and ways of life.

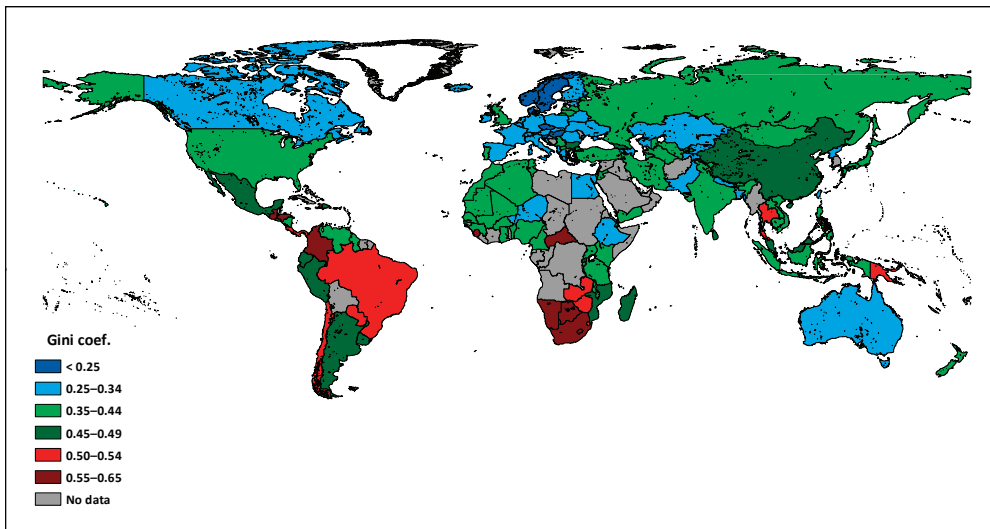
III. Income Inequality Within Countries

The variation in incomes across households and individuals within a country can also be very large. We must take into account not just a country's average level of income, but its distribution of income. To use an old quip, a man whose feet are in the fire and whose head is on ice is asked, "How's the temperature?," and he replies, "On average just fine." The inequality of fire and ice is devastating, and societies can also be like that in their divisions of income, wealth, and opportunity. On average, income can be just fine, but if the average income is "just fine" because a few people are fantastically rich and the rest of the country is excruciatingly poor, things are not so fine after all.

Therefore, in addition to measuring the GDP per person, we want to measure the inequality of income within the country. Several indicators are used. We can look at the ratio of incomes of those at the top of the income distribution to those at the bottom, sometimes comparing the average incomes of the richest (top) 20 percent and poorest (bottom) 20 percent of households. Another useful, widely used measure is the Gini coefficient. The Gini coefficient varies between 0.0 and 1.0, with 0.0 meaning complete equality of income (every person or household has the same income), and 1.0 signifying complete inequality (all income is owned by one person or household, with all the rest having no income). Real societies are of course somewhere in between. Societies regarded as rather equal, with a broad middle class, like Sweden, Norway, or Denmark, have a Gini coefficient around 0.25. Countries that are much less equal by comparison, with both a lot of wealth at the top and a lot of poverty at the bottom, have a Gini coefficient of 0.4 or higher. Figure 2.5 maps the Gini coefficient around the world with the best recent comparative measurements. Note that measuring the Gini coefficient is difficult, with countries using survey data in different years and often with different definitions.

The lowest inequality (the blue countries) tends to be in western Europe and especially in Scandinavia, with a Gini of around 0.25. In comparison with Scandinavia, the United States is shaded green, as the United States is quite unequal in income distribution, with a recent Gini of 0.45. The United States has an estimated 442 billionaires and a remarkable estimated 13 million households with a net worth of more than 1 million dollars. Yet the United States also has tens of millions of very poor people, with very low incomes and almost no net worth at all (or, in fact, net debt). America's poor are not as excruciatingly poor as one would find in the LDCs, but they are poor indeed, having difficulty keeping food on the table. African countries, for those with Gini data, are also rather unequal. China was rather equal in pervasive poverty fifty years ago, but with its recent economic development and a stark divide between the wealthier urban areas and poorer rural areas, the inequalities in China have risen to levels similar to those of the United States.

Looking at the Gini coefficient among the high-income countries shows there are very different pathways to economic development. Getting richer does not mean necessarily becoming more unequal, but nor does it guarantee becoming



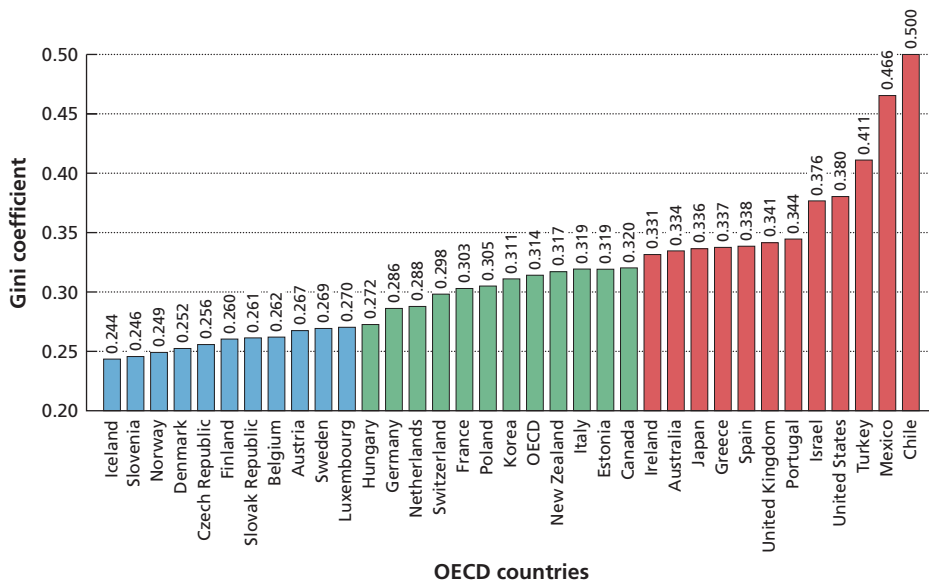
2.5 Gini coefficients around the world

Source: The World Factbook. CIA.

more equal. There are different pathways for development. Northern Europe has chosen a pathway of becoming wealthier with considerable social equality, whereas the United States has been on a path of rising incomes alongside rising inequality, as is shown in figure 2.6.

How do we explain these gaps? This is a very complicated, contentious, and much-debated topic. There are many reasons for inequality. History, geography, and government all play a big role in a society's relative equality or inequality. Traditionally, when most wealth was farm wealth, the size of landholdings made a big difference. Some countries, especially in the Americas, had huge farms and haciendas that were often taken by the Europeans who came to the Americas, displaced indigenous populations, and used slaves to work the large farms. These inequalities in the Americas continue today, though in more subtle ways.

In today's world where industry and services are much more important, variations in education levels are also a very significant source of inequality. Young



2.6 Gini coefficient in high-income countries (late 2000s)

Source: Organization for Economic Co-operation and Development. 2014. "Income Inequality." In OECD Factbook 2014: Economic, Environmental and Social Statistics. OECD Publishing. doi: 10.1787/factbook-2014-24-en.

people who are able to obtain a higher education are also usually able to translate their higher education into higher income levels. Children who are not able to obtain a higher level of education, often because of poverty, may end up with very low-paying jobs. Education can become an equalizer if everybody has the same educational opportunity, but it can also become a source of inequality as well if only the children of the rich are able to obtain a quality education.

As I noted, the rural-urban divide is another key to inequality. Families that move to urban areas often find better employment prospects and higher incomes, whereas those left in villages as smallholder farmers often barely survive.

Discrimination still matters tremendously. Women all over the world are not given the same chance as men in the labor market and do not earn the same incomes, even when they are doing the same job or better. Racial, ethnic, and

religious minorities often face terrible conditions that hinder their access to education and to quality jobs in the labor market. Consequently, they are unable to get the kind of employment they deserve.

Government policies can make a huge difference to promoting equality or favoring inequality. Corrupt governments that use their revenues for a very small class of insiders tied to the government can create a huge amount of inequality. Often countries that live off a few mining resources such as oil, gold, or diamonds are very unequal because of the ways the government revenue is allocated among the favored insiders. The result can be what is known as the “natural resource curse,” the paradox that a country with abundant natural resources ends up poor and undeveloped with massive corruption and inequality. (There can be other causes of a natural resource curse, such as when a resource boom causes an overvalued exchange rate that hurts the more technologically dynamic sectors in agriculture and industry.)

At the same time, governments can be great equalizers. If governments use revenues to ensure widespread access to education and health care, they can narrow the income inequality while also raising overall economic efficiency (by ensuring that the poor, like the rich, can invest in their own lifetime productivity). In Scandinavia, poor families are given financial support to ensure that their children too will still have a good chance to succeed in life. The result is a very low level of poverty, a high overall prosperity, and a very low degree of income inequality across households.

There is a lot of choice about what can be done to promote greater equality, and we are living in a period when we face that choice more starkly than ever. Practicing sustainable development means both understanding the nature and sources of inequality and setting the goal of a high degree of social inclusion in economic development. This is our battle and our challenge, to understand the inequalities of income within societies and to ensure that all children, rich and poor, have the chance of prosperity. If we find ways to ensure a big middle class and a decent chance for a child born into a poor family, as the impressive Scandinavian societies have done, that can become the path to social inclusion, a key pillar of sustainable development.

IV. Measuring Wellbeing

We are all interested in the overall quality of our lives, sometimes described as “life satisfaction,” “wellbeing,” or “happiness.” Part of this wellbeing is determined by the ability to meet our material needs and aspirations, and therefore depends on income. Part depends on the social services provided by the government. We are also affected by the extent of personal security or insecurity (e.g., living in a war zone). Of course, extreme poverty is an affront to wellbeing and life satisfaction. Impoverished families go hungry, lack safe water and sanitation, and cannot access health care when they need it. Children die young and tragically. Extreme poverty is a burden that deserves our highest priority.

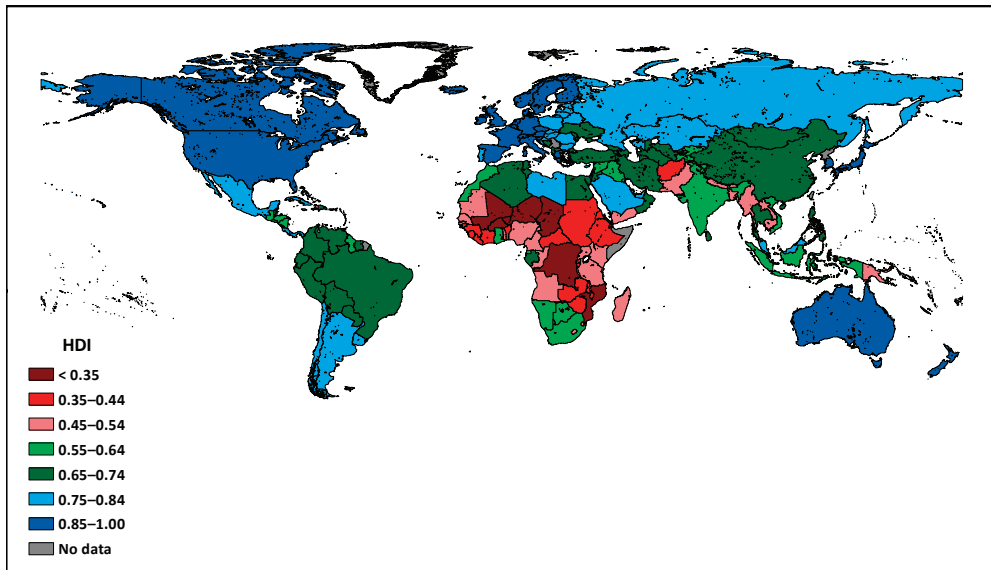
Yet we also know that “man does not live by bread alone.” Material possessions are not everything. In fact their importance diminishes in proportion to income. For a poor family, income may loom largest as the determinant of wellbeing. An extra dollar of income can be the difference between a meal or no meal. For a rich person, an extra dollar of income will have essentially no effect at all on wellbeing.

We therefore know that simple measures like GDP per person give only a rough reflection of the overall level of wellbeing of an individual or a nation. But for sustainable development we are interested in raising human wellbeing, not just in raising income, still less in a mad race for more riches for people who are already rich. Therefore, it is important to ask how we can best measure wellbeing (or life satisfaction) beyond GDP per capita.

What then are some of the options for measuring human wellbeing that go beyond the simple calculation of the GDP per person? One important innovation, championed by the UN Development Programme (UNDP) during the last quarter century, is the Human Development Index (HDI) (UNDP 2013b). It tries to give a more holistic account of human development by taking into account the important things that empower people and help them meet their capacities. The Human Development Index takes income per person as one of the three basic dimensions of wellbeing. Instead of measuring income per capita directly, it uses the *logarithm* of income per capita. Using the logarithm, each higher level of income boosts the HDI by a smaller increment.

The HDI also uses indicators of educational attainment, such as mean and expected years of schooling, and indicators of health, notably the life expectancy at birth. By taking the weighted average of income, education, and health, UNDP creates the HDI. The map of the HDI in figure 2.7 is similar to the map of GDP per person, but it is by no means the same. Note that tropical Africa is once again the epicenter of the development challenge. Just as the World Bank categorizes countries as high-, middle-, and low-income, UNDP categorizes countries as exhibiting high, middle, and low levels of human development.

The GDP per capita and HDI are related but not the same. There are countries that are relatively low on income per capita but do quite well on the HDI, because they have favorable outcomes on life expectancy and educational attainment; and there are countries that are very rich on paper according to GDP per capita, yet their populations suffer poor standards of health and education and hence a level of human development far lower than would be suggested by income alone.



2.7 Human Development Index rankings

Source: United Nations Development Programme. 2013. Human Development Report 2013. New York: United Nations Development Programme.

It is helpful to take a look at some examples of countries that are rather rich in terms of their GDP per capita but rather poor on their human development indicators. Equatorial Guinea is such a case. Equatorial Guinea was an utterly impoverished country in West Africa until major resources of oil and gas were discovered and developed by international oil companies. Those hydrocarbon resources can be hugely beneficial to the people of Equatorial Guinea, but only if those oil and gas earnings are used wisely and invested in raising overall wellbeing. Yet so far, Equatorial Guinea's GDP per capita has run far ahead of the outcomes on literacy, life expectancy, and other dimensions of life. The great boost of oil income has yet to reach the large masses of the population in terms of discernible increases in quality of life. As it stands today, Equatorial Guinea ranks rather high on income per person, at 41st in the world; yet it ranks 144th in the HDI.

Other countries, by contrast, rank much higher on human development than on their average income per capita. A solid case in point is South Korea, one of the world's greatest development success stories in modern history. South Korea has had enormous economic growth over the last half century and has become one of the richest countries in the world. Part of that has resulted from its remarkable focus on raising educational standards and improving the health of the population. South Korea now ranks roughly thirtieth in GDP per capita on world standings, while it ranks even higher in HDI, at fifteenth in the world.

Table 2.1 includes some other interesting examples. The reader can suggest reasons for these discrepancies.

Subjective Wellbeing

There is another fascinating way that we can attempt to assess wellbeing. Why not ask people directly about the quality of their lives? Most frequently, surveys use what is called the Cantril ladder. People are asked to place their lives on a ladder with ten rungs, where the top (tenth) rung is the best possible life and the bottom rung is the worst. Specifically, the international survey firm Gallup International asks the following:

Table 2.1 Rankings of GDP per Capita and HDI for Selected Countries, 2013

Country	GDP per capita rank	HDI rank	Difference
Some countries with HDI higher than GDP per capita			
United Kingdom	23	14	9
New Zealand	21	7	14
Slovenia	34	25	9
South Korea	30	15	15
Some countries with GDP per capita higher than HDI			
Qatar	3	31	-28
Kuwait	17	46	-29
Equatorial Guinea	41	144	-103
Gabon	60	112	-52

Source: HDI from UNDP 2014; GDP per capita from IMF (constant USD).

Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top.

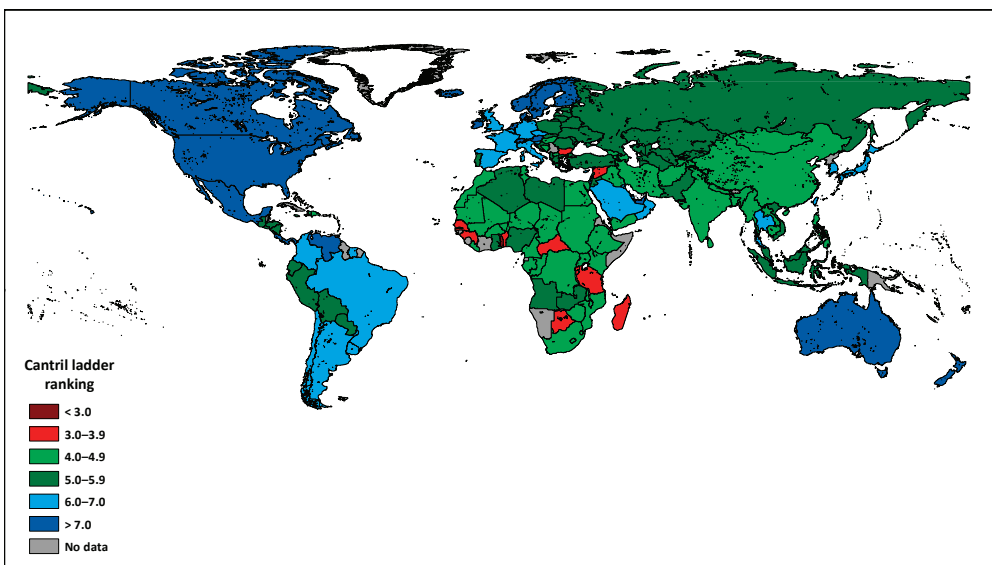
The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you.

On which step of the ladder would you say you personally feel you stand at this time?

In recent years there has been an enormous, eye-opening global effort to assess in that straightforward way. The Organization for Economic Co-operation and Development and Gallup International have been in the forefront of this movement. The recent global results have been published in the *World Happiness Report*, which can be downloaded for free (Helliwell, Layard, and Sachs 2013).

Psychologists and other survey experts distinguish between two quite distinct dimensions of happiness and two very different kinds of questions to elicit these dimensions of happiness. One is to ask about a person's recent emotions. "Did you have a good day yesterday?," "Were you happy?," "Did you smile?" This is sometimes called emotional or *affective* happiness. The other way is to ask about overall life satisfaction, as is done with the Cantril ladder. "Are you satisfied with your life as a whole?," "Where would you put yourself on the ladder of life?" This is called *evaluative* happiness, since it seeks something more permanent than yesterday's emotions. It seeks an actual evaluation of life as a whole. Both measures are important, but evaluative happiness is the one used to get an overall sense of life satisfaction in a country.

Figure 2.8 shows the distribution of reported evaluative happiness around the world, based on the Cantril ladder. It is quite fascinating. Richer countries do tend to be happier, but some middle-income countries are close to the top of the



2.8 Subjective wellbeing around the world

Source: Helliwell, John, Richard Layard, and Jeffrey D. Sachs. 2013. World Happiness Report. New York: Sustainable Development Solutions Network.

charts in happiness, and some richer countries are not so happy. We can learn a lot from this. The Americas, western Europe, Australia, and New Zealand rank highly on happiness, while some of the poorer regions, perhaps not surprisingly, rank much lower.

What do we learn when we study the differences in life satisfaction around the world in this evaluative sense? (I will use the word “happiness” as shorthand for “life satisfaction” in this discussion.) We find out that income per person (GDP per capita) indeed matters, but as just one aspect of happiness. A second major reason for happiness versus unhappiness is “social capital,” or the quality of the social environment and community. Do people have good support networks of friends and colleagues? Do they trust others in their community? Do they trust their government to be honest? The quality of social life is an enormously important determinant of whether people report high or low life satisfaction. As Aristotle said more than 2,000 years ago, “Man is by nature a social animal.” Our happiness depends fundamentally on our relations with others.

Not surprisingly, physical and mental health play a very important role. We should underscore that mental health—for example, the presence of depression or anxiety disorders—can cause havoc in a person’s life, lowering life satisfaction dramatically. The availability of mental health services is therefore a key intervention in raising life satisfaction for people suffering from mental health disorders.

Finally (though not exhaustively), each individual’s values and the values of society at large are related to happiness. People who report a very strong orientation to materialistic values (such as an intense drive to earn more money or to accumulate more consumer goods) do not report as much life satisfaction as those with a less materialistic orientation. Buddha, Aristotle, and other sages made this point in ancient times, and it has been verified in careful modern psychological studies and opinion surveys. Those individuals who report that generosity is very important to them, through volunteering, philanthropy, or other forms of altruism, also report greater happiness. The role of altruism not only in helping the recipient but in helping the giver as well is obviously important in thinking about the path to sustainable development.

If we as individuals simply pursue income per capita as our main goal in life, we will lose out on many counts. Our societies will tend to become highly unequal.

The rich will use their political influence to gain further income and wealth. The environment will come under great threat, since short-term desire for income will tend to trump long-term concern for the environment and the wellbeing of future generations. In the end, if our societies are driven overwhelmingly by the goal of increased incomes and consumerism, we are unlikely to achieve the kind of happiness and life satisfaction that we desire. With a more balanced and holistic approach, as sustainable development bids us to undertake, greater happiness can arise. Yes, societies should pay attention to higher income per person (especially when they are poor!), but they should also focus on health, social inclusion, honest government, and networks of social support and altruism. Societies will benefit if they find ways to promote the values of generosity, compassion, and volunteerism rather than the values of individualistic materialism.

In the end, the overriding goal is not income but life satisfaction and wellbeing. We have seen again and again the importance of a holistic perspective. Fortunately, as we have seen, we have more and more tools to measure, to assess, and ultimately to help promote improvements in wellbeing.

V. Convergence or Divergence?

One of the most important questions in the study of economic development is whether today's poor countries have the chance, and indeed are on a path, to close the large gap in GDP per capita and other indicators of wellbeing with the high-income countries. That successful transition would improve not only income per person but also other important aspects of life such as health, life expectancy, educational attainment, and life satisfaction. Throughout this book, and throughout the pursuit of sustainable development, we are interested in determining how poor countries can narrow and eventually close the development gap with richer countries.

Economists use a couple of important terms for this concept. The term *convergence* is used to convey a narrowing of the proportionate gap of a poor country and a richer comparison country. (The proportionate gap signifies the ratio of the poor country to the rich country in the variable of interest.) The opposite of convergence

is *divergence*, which means that the poorer country, in relative terms, is becoming even poorer when compared with the rich country. The study of whether countries are converging or diverging tells us a lot about whether overall differences of material life, life expectancy, health, educational levels, and the degree of urbanization are tending to narrow or instead are tending to widen. This is a very complicated question, and no one story line fits all cases. It is fair to say, however, that in broad terms the first phase of modern economic growth, roughly from 1750 to 1950, was characterized mainly by divergence and since the middle of the twentieth century, the forces of convergence have tended to gain the upper hand.

Modern economic growth, we shall see shortly, took off in the Industrial Revolution, roughly dated from around 1750 to 1850. Until the Industrial Revolution, most of the world was poor and rural, and so the gaps of rich and poor countries were quite narrow, not like the huge gaps today. The Industrial Revolution sparked a takeoff in GDP per capita in a relatively small part of the world, starting in England and then spreading to all of Great Britain, much of western Europe, across the Atlantic to the United States and Canada, and across the Pacific to Oceania (Australia and New Zealand). Initially, very few other places experienced early industrialization. The overall economic process viewed globally was one of divergence. The rich in Great Britain, the United States, and a few other places, were becoming richer because they were industrializing. The poor remained as they always were, eking out their living in peasant farming in most of the world, relatively untouched by the new inventions of the steam engine, railroad, telegraph, or other technological advances.

Then came a major new phase in the political phenomenon of imperialism. As western Europe became industrially and militarily dominant, it also seized political control over more and more of the world, notably in Africa, Asia, and the Middle East. This was a big political setback to the potential of convergence. Colonized peoples were not able to undertake the key steps crucial for economic development, such as improving infrastructure and raising educational levels. The imperial masters were generally not interested in the overall economic and social development of their colonial possessions but were focused on extracting as many of the resources of those countries as they could for the benefit of the home country and its industries.

In the two decades after World War II, a quite different political development, one very important for global economic development, occurred: the end of imperial rule. Countries around the world rapidly gained political independence, often through political and military struggle, and this newly won independence gave them a much greater ability to undertake economic development on their own. Newly independent countries were finally able to start building infrastructure to provide a basis for industrial development, and they began trying to attract both foreign and domestic investors. With that massive global political change, faster economic growth in the poorer countries became much more of a typical condition than it had been in the decades prior to the 1950s. Further technological developments such as better transport, better communications, and the new information age enabled the poor countries of the world to pick up the pace of their economic development. The past half century has thus seen a tendency toward convergence.

One of the crucial goals of sustainable development is that *all of today's low-income countries*, especially the LDCs, should make that transition successfully through convergence to at least middle-income status. It is therefore critical for us to understand how that process can work and to address and overcome some of the remaining barriers to convergence. The world today provides many examples of countries that were once poor achieving very rapid convergence. China is the exemplary case, with an astounding economic performance over the roughly thirty-five years since 1978, the watershed year in which China undertook many important economic reforms that put it on a path of convergent growth.

Yet we also see many parts of the world still stuck in poverty. That is a poverty trap so tight that countries are not yet achieving economic convergence. Niger is an example of such a country. It is a landlocked country in the Sahel region of Africa, just south of the Sahara Desert. It is one of the world's poorest countries. It is also at the bottom of the world's HDI, meaning that not only is it income poor, but its health and education conditions are dire as well. Unlike China, Niger has been stuck in a poverty trap for a long period and has not been achieving economic convergence. The numbers are illuminating. Looking at GDP per person in PPP-adjusted terms, which take into account differences in price levels across countries, the U.S. per capita income in 1980 in the prices of those days was about

\$12,000 per person. In China, it was about \$250 per person. In Niger it was about \$450 per person (IMF 2014).

Now fast-forward to the year 2010. What has happened? We have already noted in the previous chapter the growth of Shenzhen, China, from a village to a modern metropolis. China experienced more than three decades of double-digit economic growth, with the economy doubling roughly every seven years on average. That meant that by the time 2010 came around, China was no longer at \$250 per person; it was now at nearly \$10,000 per person.

Niger, unfortunately, is still stuck at below \$1,000 per person and is still among the least developed countries. China therefore went from being around 2 percent of the U.S. GDP per person to being around 20 percent. It is still far below the U.S. income level, but it is narrowing the gap very quickly. Niger, sadly, started out at around 4 percent of the U.S. per capita level, but by 2010 was less than 2 percent. In other words, it has been falling behind and experiencing divergence rather than convergence. One of the most important objectives in the coming chapters will be to examine the processes of convergence versus divergence to try to understand the underlying factors so that today's poorest countries still stuck in the poverty trap, like Niger, can get themselves (with the help of the rest of the world) on to a trajectory of convergence. When that happens, these countries too can enjoy the improvements in material life and related benefits (in health, education, and more) that we know are key components of improved wellbeing.